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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,537	12/19/2005	Takuzo Sano	OGW-0410	9370
7590 09/14/2009 Patrick G. Burns-Greer, Burns & Crain, Ltd. 300 South Wacker Drive, Suite 2500 Chicago, IL 60606			EXAMINER SULTANA, NAHIDA	
			ART UNIT	PAPER NUMBER
			1791	
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			09/14/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,537

Applicant(s)

SANO ET AL.

Examiner

NAHIDA SULTANA

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/03/2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This final action is in response to the amendment received on 06/03/2009, for the non-final action sent on 09/17/2008.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashley, Jr. et al. (US Patent 4, 962, 587) in view of Secolo et al. (US Patent 4, 589, 177).

For claim 1, Ashley et al. teach:

A method of manufacturing a support body for run flat ("A method for producing vehicle wheel rims is disclosed. The method, as applied to a wheel rim perform having given..."; Abstract), which comprises pressing a circumferential wall of a tubular blank between inner and outer molding rollers and rotating the inner and outer molding rollers to form at least one circumferentially continuous protruding part on the circumferential wall of the tubular blank to process the tubular blank into an annular shell (Col.2, lines 1-15; Figure 3-6, items 25, 37; "With reference to FIG. 3a, metal spinning apparatus suitable for use in producing a stretched wheel rim according to the present invention, is illustrated. A mandrel mounted on spindle 26 for rotation thereabout, by fasteners 27.

Opposite mandrel 25 is an end plate 28 mounted on a spindle for rotation thereabout by fasteners 30..."; Col. 3, lines 18-65; Col. 4, lines 1-25) wherein the inner molding roller is having-the maximum outer diameter of the inner molding roller is substantially the same as the inner diameter of the tubular blank (col. 3. lines 35-50, col. 4. lines 30-40). Ashley et al. also teach the size and profile of the forming roller may be varied from that illustrated in Fig. 7 (col. 4. lines 30-40).

However, Ashley et al. do not specifically show: wherein using molding surfaces of the inner molding roller and the outer molding roller in which a protruding curved part and a recess curved part are curved to each other in a reverse relationship and are continuous in the circumferential direction, the circumferential wall of the tubular blank is pressed between the inner molding roller and the outer molding roller.

In the same field of endeavor, method of manufacturing without welding, light alloy rims for motor vehicles, Secolo et al. teach: of the inner molding roller and the outer molding roller in which a protruding curved part and a recess curved part are curved to each other in a reverse relationship and are continuous in the circumferential direction (Fig. 3. Item 6 and 7 ("complementary rollers"), 5 ("blank material"); Fig. 4. Items 9-10 ("complementary rollers"); "complementary profile as shown in Fig. 4." col. 2. Lines 25-50), the circumferential wall of the tubular blank is pressed between the inner molding roller and the outer molding roller (Fig. 4. Item 9-10, and 5a-5d ("deformed sections")), for the benefit of having particular shape, for holding known wheel balancing weights, also produce a pair of parallel and circumferential ribs when strengthen the sides of the finished rims (col. 2. lines 55-60).

It would have been obvious to one ordinary skill in the art at the time of the applicant's invention to modify the method of manufacturing support body for tires as taught in Ashley et al. with having complementary profiled roller as shown in Secolo et al. for the benefit of having particular shape, for holding known wheel balancing weights, also produce a pair of parallel and circumferential ribs when strengthen the sides of the finished rims (col. 2. lines 55-60). Because Ashley et al. teach method for making a wheel rim to support and balance tires (col. 4. lines 55-68, col. 5. lines 15-35); it would have been obvious to one ordinary skill in the art to use metal shaping to make tubular blank, as claimed to support tires.

For claim 2, Ashley, Jr. et al. teach wherein the maximum outer diameter of the inner molding roller is in a range of 95% to 100% of the inner diameter of the tubular blank (Figure 3-7, items 25, 37, 10; col. 3. lines 30-50, Col. 4, lines 30-40). The previous combination and motivation remain as applied.

For claim 3, Ashley, Jr. et al. teach:

A device for manufacturing a support body for run flat ("...a metal spinning apparatus suitable for use in producing a stretched wheel rim, according to the present invention, is illustrated..." col. 3. lines 19-30), which comprises inner and outer molding rollers to press the circumferential wall of a tubular blank between the inner and outer molding rollers that are rotated to form at least one circumferentially continuous protruding part on the circumferential wall of the tubular blank to process the tubular blank into an annular shell (Figure 3 Item # 37 and 25; "A vehicle wheel rim perform 10 is illustrated in FIG. 3, mounted on the end plate 28 and the mandrel 25 for rotation

therewith about the common axis of rotation R. The end plate 28 has a surface 31 which is sized to provide friction fit with the interior surface 32 of perform 10, opposite the beat seat area 14, similarly the mandrel is sized, adjacent a first end 33 thereof to fit snugly inside the perform 10, internally engaging well 11 as shown"; Col. 3, lines 31-51). Ashley et al. also teach the size and profile of the forming roller may be varied from that illustrated in Fig. 7 (col. 4, lines 30-40); wherein the maximum outer diameter of the inner molding roller is substantially the same as the inner diameter of the tubular blank (Col. 3, lines 31-51).

However, Ashley et al. do not specifically show: wherein the inner molding roller and the outer molding roller have molding surfaces in which a protruding curved part and a recess curved part on the respective outer circumferential surfaces are curved to each other in a reverse relationship and are continuous in the circumferential direction.

In the same field of endeavor, method of manufacturing without welding, light alloy rims for motor vehicles, Secolo et al. teach: of the inner molding roller and the outer molding roller in which a protruding curved part and a recess curved part are curved to each other in a reverse relationship and are continuous in the circumferential direction (Fig. 3. Item 6 and 7 ("complementary rollers"), 5 ("blank material"); Fig. 4. Items 9-10 ("complementary rollers"); "complementary profile as shown in Fig. 4." col. 2. Lines 25-50), the circumferential wall of the tubular blank is pressed between the inner molding roller and the outer molding roller (Fig. 4. Item 9-10, and 5a-5d ("deformed sections")), for the benefit of having particular shape, for holding known wheel balancing

weights, also produce a pair of parallel and circumferential ribs when strengthen the sides of the finished rims (col. 2. lines 55-60).

It would have been obvious to one ordinary skill in the art at the time of the applicant's invention to modify the method of manufacturing support body for tires as taught in Ashley et al. with having complementary profiled roller as shown in Secolo et al. for the benefit of having particular shape, for holding known wheel balancing weights, also produce a pair of parallel and circumferential ribs when strengthen the sides of the finished rims (col. 2. lines 55-60). Because Ashley et al. teach method for making a wheel rim to support and balance tires (col. 4. lines 55-68, col. 5. lines 15-35); it would have been obvious to one ordinary skill in the art to use metal shaping to make tubular blank, as claimed to support tires.

For claim 4, Ashley, Jr. et al. teach: wherein the inner molding roller adopts a structure that allows the roller to be disassembled into a plurality of parts (Figure 3, Items # 28 ("end plate), 29 ("spindle for rotation"), 33-34 ("first and second end")); Col. 3, lines 30-50). The previous combination and motivation remain as applied.

For claim 6, Ashley Jr. et al. teach: wherein the maximum outer diameter of the inner molding roller is set to be as large as 95 % to 100 % of the inner diameter of the tubular blank (Example figure 3-7; "It may be desirable, in some instances, to drive roller 37 independently of the rotating wheel rim perform. The size and profile of the forming roller may be varied from that illustrated in FIG. 7"; Col. 4, lines 30-40; The end plate 28 has a surface 31 which is sized to provide friction fit with the interior surface 32 of perform 10, opposite the beat seat area 14, similarly the mandrel is sized, adjacent a

first end 33 thereof to fit snugly inside the perform 10, internally engaging well 11 as shown"; Col. 3, lines 31-51). The previous combination and motivation remain as applied.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashley, Jr. et al. (US Patent No. 4, 962, 587), Secolo et al. (US Patent 4, 589, 177) in view of Luedi (US Patent No. 4, 050, 135).

Regarding claim 5, Ashley, Jr. et al. and Secolo teach all the limitation to the claimed invention above, but failed to teach wherein the inner molding roller adopts a structure that allows the roller to shrink in a radial direction.

In the same field of endeavor, flat base truck rim forming system, Luedi teach: wherein the inner molding roller adopts a structure that allows the roller to shrink in a radial direction ("The expandable outer die 23 is also segmented, comprising multiple die segments 32 and jaws 37 carried by lower table 33 To permit radial movement of the die segments 32, each jaw 37 is slideably received in a channeled formed by the table 33 so that the jaws are free to slide radially back and forth along the channel. Thus, the outer die 23 formed by the multiple segments 32 can be expanded and collapsed in the radial direction."; Col. 3, lines 39-45; see example figures 4- 5).

It would have been obvious to one ordinary skill in the art at the time of the applicant's invention to have rollers which can assemble into multiple parts taught as previously taught by Ashley Jr. et al. (Fig. 3) with having rollers that can expand and

collapse in radial direction, as taught in Luedi, for the benefit of providing sufficient clearance to enable rim blank to pass radically there between while forming the desired shape of the rim.

Response to Arguments

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patents: 7, 313, 864 B2, 6, 978, 649 B1; 2, 185, 347; 4, 266, 417

US Publications 2007/0084538 A1; 2003/229987 A1; 2005/0028367 A1.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAHIDA SULTANA whose telephone number is (571)270-1925. The examiner can normally be reached on Mon- Fri 7:30 Am - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on 517-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NS

/Joseph S. Del Sole/

Supervisory Patent Examiner, Art Unit 1791